WEATHER OF NORTH AMERICA AND ADJACENT OCEANS.

GENERAL CONDITIONS.

By A. J. HENRY, Meteorologist.

The distribution of normal pressure over the Northern Hemisphere for March differs but slightly from that of February except that there is a rather pronounced fall over the great Continental Highs amounting to as much as 0.20 inch in Siberia and about half that much on the North American Continent. Normal pressure, February to March, increases in the polar regions, especially over Greenland and oceanic areas southward therefrom to 45 degrees N. latitude.

The pressure distribution of the current month was mostly in accordance with the normal. Stormy weather was experienced locally over portions of the oceanic areas and over continental areas a few storms of tornadic violence were reported; otherwise seasonal weather was experienced.

NORTH PACIFIC OCEAN.

By F. G. TINGLEY.

As indicated in the report of conditions for February, a storm of some importance appeared to be developing in the region immediately to the eastward of Japan at the close of the month. Subsequent reports have confirmed this. During the period from Feb. 23–28 winds as high as force 12 were experienced within the area between the 140th and 165th meridians, east longitude, and the 30th and 40th parallels.

The weather continued generally stormy within this area during the first week of March, winds of gale force being reported from some point every day until the 8th, inclusive. East of the 165th meridian quiet conditions prevailed, with only occasional gales, of moderate force, mostly from a westerly direction.

During the second week of the month storm conditions gradually progressed to the eastern part of the ocean, where, from the 11th to the 15th, winds of gale force prevailed very generally.

After the 8th the western part of the ocean was relatively free from storms, only one having thus far been reported. This appears to have been of limited extent but of considerable intensity. It occurred on the 20th and 21st in the region lying between the 160th and 170th meridians and near the 35th parallel. Two vessels, the Japanese steamships *Darien Maru* and *African Maru* which encountered this gale, report winds of force 10, with tremendous seas.

Altogether, winds of gale force were reported by different vessels for a total of 47 times during the month, as follows: Force 7, 29 times; force 8, 10 times; force 9, 2 times; force 10, 5 times; force 11, once.

No reports have been received to indicate that any unusual conditions or noteworthy phenomena occurred on the North Pacific Ocean during the month.

NORTH AMERICA.

By A. J. HENRY, Meteorologist.

The temperature in the eastern portions of the United States and Canada was mild for the season, thus maintaining the characteristics of the previous month; and the winter as a whole must be classed as a mild one. The temperature in the northern tier of States west of the upper Lakes was below the seasonal normal and also to a greater or less extent in the Rocky Mountain region and thence westward to the coast.

Precipitation was generally ample in amount and well distributed both in time and space. The snow cover was decidedly less than the average, except in the higher altitudes of the Rocky Mountain region.

Severe local storms and tornadoes occurred, but their number was not in excess of the normal expectancy.

Severe floods were entirely absent and the usual spring rise in the rivers in northern districts was distinctly affected by the absence of any considerable snow cover.

NORTH ATLANTIC OCEAN.

By F. A. YOUNG.

The general atmospheric conditions for March, 1919, showed a decided contrast to those of the previous month when the average pressure was considerably below the normal. For the month under discussion the mean barometric readings at a number of stations on the Atlantic and Gulf coasts were above the normal, the same conditions holding true at the Azores and Bermudas. Not enough vessel reports were received in time to determine accurately the average pressure over the different divisions of the ocean, although from an examination of those at hand it is evident that over the steamer lanes the pressure was also higher than usual.

The number of days on which gales occurred was apparently not far from the normal over the greater part of the ocean, except that in the western part of the steamer lanes they seemed to be slightly more frequent than usual.

On March 1 a LOW was central in the vicinity of latitude 45°, longitude 30°, and moderate to strong westerly and northwesterly gales prevailed over the area between the 38th and 45th parallels and the 35th and 55th meridians, accompanied by rain and hail over the eastern section. During the next four days this disturbance moved eastward with a fairly uniform rate, diminishing gradually in intensity, and on the 5th the center was near Brest, France.

On the 4th there was a well-developed LOW near latitude 43° and longitude 53° (See chart IX. The cyclonic movement of the wind was very marked, and southerly gales of from 40 to 60 miles were reported from the easterly quadrants, while northerly winds of about the same force prevailed west of the center. This disturbance drifted slowly eastward, and on the 5th was central near latitude 43°, longitude 43°, the storm area having contracted slightly since the previous day.

From the 6th to the 8th the circulation of the air, for the most part, was comparatively sluggish, and unusually high pressure prevailed over the western division of the ocean. On the latter date, however, one vessel near latitude 55°, longitude 27°, reported a westerly gale the morning of the 9th westerly gales were encountered in of about 50 miles an hour, accompanied by "hail." On mid-ocean, north of the 45th parallel, and while no storm reports were received from vessels off the American coast, the anemometer at New York registered a velocity of 48 miles an hour from the east, with a maximum force of 56 miles during the night of the 8th.

On the 10th there was a well-developed LOW central near Halifax, N. S., where the barometer reading was 29.40 inches, while at St. Johns, Newfoundland, it read 30.24